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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/028,470	12/19/2001	Matthew J. Holliman	42390P13154	1916

7590

10/22/2003

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EXAMINER

KIM, CHONG R

ART UNIT

PAPER NUMBER

2623

DATE MAILED: 10/22/2003

5

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/028,470

Applicant(s)

HOLLIMAN ET AL.

Examiner

Charles Kim

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) 23-27 and 29 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-22 and 28 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 December 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Election/Restrictions

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
 - I. Claims 1-22, 28 are drawn to adjusting a parameter set for data processing based on the presence of data corruption determined by the amount of a recovered watermark, classified in class 382 subclass 100.
 - II. Claims 23-27, 29 are drawn to adjusting a billing value of data based on the quality of the received data determined by the amount of a recovered watermark, classified in class 380 subclass 231.
2. Inventions I and II are related as subcombinations disclosed as usable together in a single combination. The subcombinations are distinct from each other if they are shown to be separately usable. In the instant case, invention I has separate utility such as adjusting a parameter set for data processing based on the presence of data corruption. See MPEP § 806.05(d).
3. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.
4. During a telephone conversation with Steven Skabrat (Registration No. 36,279) on October 9, 2003, a provisional election was made without traverse to prosecute the invention of

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group I, claims 1-22, 28. Affirmation of this election must be made by applicant in replying to this Office action. Claims 23-27, 29 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 15-18, 20, 21 are rejected under 35 U.S.C. 102(e) as being anticipated by Tian et al., International Publication No. WO 02/23468 A1 (“Tian”).

Referring to claim 15, Tian discloses a data degradation measurement system comprising:

- a. a watermarking module to embed a recoverable watermark in a data set (page 13, lines 2-11)
- b. a processing module for modifying the data using some parameter set (page 12, lines 4-20. Note that the packet distribution system modifies the data using some parameter set)
- c. a watermark recovery module to determine presence of data corruption of the data set with respect to an original data set by measuring the amount (strength) of a recovered watermark (page 13, line 10-page 14, line 10).

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Referring to claim 16, Tian further discloses a transform encoding processor to process the data set by transform encoding the data set (page 8, lines 17-24).

Referring to claim 17, Tian further discloses a packetizer to process the data set by packetizing and transmit the data set (page 12, lines 12-20).

Referring to claim 18, Tian further discloses that the watermark recovery module further detects image frame errors in packet transmitted audiovisual data sets (page 12, lines 12-14).

Referring to claim 20, Tian further discloses that the watermark recovery module quantitatively measures spatial extent of corruption of image data sets (page 14, lines 12-32).

Referring to claim 21, Tian further discloses that the watermark recovery module quantitatively measures temporal duration of corruption of data sets (page 17, lines 7-27).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-14, 19, 22, 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Tian et al., International Publication No. WO 02/23468 A1 ("Tian"), and the article entitled "Meeting QOS guarantees by End-to-End QOS Monitoring and Adaptation" by Huard et al. ("Huard").

Referring to claim 1, Tian discloses a method of:

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- a. embedding a watermark in a data set (page 13, lines 1-9)
- b. processing the data using some parameter set (page 12, lines 4-20. Note that the packet distribution system processes the data using some parameter set)
- c. determining presence of data corruption of the data set with respect to an original data set by measuring the amount of a recovered watermark (page 13, line 10-page 14, line 10).

Tian fails to teach the step of adjusting the parameter set for the data processing (distributing) based on the presence of data corruption. However, this feature was exceedingly well known in the art. For example, Huard teaches the step of adjusting a parameter set for the data processing (distributing) based on the presence of data corruption [page 353, section 4.3. Huard explains that the transmission rate is adjusted based on the presence of data corruption (loss)].

Tian and Huard are both concerned with quality of service systems. Tian is concerned with processing (distributing) the data with high quality, and explains that the watermark signal is implemented to detect any quality degradation of the signal (Tian, page 15, lines 3-6).

Huard's method utilizes the detected quality degradation to adjust the transmission parameters, thereby maintaining a high quality signal (Huard, page 353, section 4.3). Therefore, it would have been obvious to combine the teachings of Tian and Huard so that the parameter set for the data processing (distributing) is adjusted based on the presence of data corruption, in order to enhance the performance of the system by maintaining a high quality signal.

Referring to claim 2, Tian further discloses processing the data set by transform encoding the data set (page 8, lines 17-24).

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Referring to claim 3, Tian further discloses processing the data set by packetizing and transmitting the data set (page 12, lines 12-20).

Referring to claim 4, Tian further discloses identifying image frame errors in packet transmitted audiovisual data sets (page 12, lines 12-14).

Referring to claim 5, Huard further discloses that adjusting the parameter set further comprises modifying network bandwidth to compensate for data corruption of the data set (page 353, section 4.3, second paragraph. Note that reducing the sending rate is interpreted as being analogous to modifying network bandwidth).

Referring to claim 6, Tian further discloses that determining the presence of data corruption further comprises quantitatively measuring spatial extent of corruption of image data sets (page 14, lines 12-32).

Referring to claim 7, Tian further discloses that determining the presence of data corruption further comprises quantitatively measuring temporal duration of corruption of data sets (page 17, lines 7-27).

Referring to claims 8-14, see the rejections of claims 1-7 respectively above.

Referring to claim 19, see the rejection of at least claim 5 above.

Referring to claim 22, see the rejection of at least claim 1 above. Tian fails to teach a back channel transmitter to communicate information to the processing module to adjust the parameter set for the data processing based on the presence of data corruption detected by the watermark recovery module.

Huard discloses a back channel transmitter to communicate information to a processing module to adjust the parameter set for the data processing based on the presence of data corruption (page 352, section 4.2).

Therefore, it would have been obvious to combine the teachings of Tian and Huard for the reasons stated above.

Referring to claim 28, Tian discloses a method of:

- a. embedding a watermark in a data set to allow reception-side determination of quality of the data set with respect to an original data set by measuring the amount (strength) of recovered watermark (page 13, line 2-page 14, line 10)
- b. transmitting the data set having the embedded watermark (page 12, lines 12-20)
- c. accepting information about determined quality of the transmitted data set (page 14, lines 8-10).

Tian fails to teach the step of adjusting a transmission parameter in response for later transmitted data. However, this feature was exceedingly well known in the art. For example, Huard teaches the step of adjusting a transmission parameter in response to a determined quality of transmitted data (page 353, section 4.3).

Tian and Huard are both concerned with quality of service systems. Tian is concerned with transmitting the data with high quality, and explains that a watermark signal is implemented to detect any quality degradation of the signal (Tian, page 15, lines 3-6). Huard's method utilizes the detected quality degradation to adjust a transmission parameter, thereby maintaining a high quality signal (Huard, page 353, section 4.3). Therefore, it would have been obvious to combine the teachings of Tian and Huard so that a transmission parameter is adjusted in response

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to the determined quality of the transmitted data, in order to enhance the performance of the system by maintaining a high quality signal.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

a. Esmailzadeh et al. International Publication No. WO 02/37694 A2 discloses a method for determining the quality of service for a network.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Charles Kim whose telephone number is 703-306-4038. The examiner can normally be reached on Mon thru Thurs 8:30am to 6pm and alternating Fri.

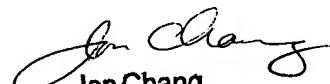
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amelia Au can be reached on 703-308-6604. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-306-0377.



ck

October 9, 2003


Jon Chang
Primary Examiner